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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,092	08/06/2001	Erik Lindgren	AN06164US/0152	9443

7590 12/18/2003
Richard P. Fennelly
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EXAMINER

CHIN, PETER

ART UNIT PAPER NUMBER

1731

DATE MAILED: 12/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/923,092	LINDGREN ET AL.	
	Examiner	Art Unit	
	Peter Chin	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11-20-2003 has been entered.

2. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being obvious over Ueda (Japanese Laid-Open Patent 1992-363301) and Blixt et al (4,964,915) taken in view of Savina (3,223,544) and Persson (WO 9955964).

Ueda discloses sizing paper with the claimed sizing composition except that Ueda is silent as to amylopectin content of the potato and corn starch that is used by example. These starches are inherently well known in the art to be below 95% amylopectin content; if evidence is required Blixt et al discloses the nominal amylopectin content of these starches to be 79% for potato and 72% for wheat in columns 4 and 5. Thus, Ueda shows the claimed starch. Ueda further discloses the addition of surfactants such as lignosulfonates on page 11.

It would have been obvious to employ the claimed condensed sulfonates since they are conventional alternatives to the lignosulfonate dispersant used in making cellulose reactive size and cationic starch sizing compositions as evidenced by Savina. Note in any case that Blixt et al also discloses polynaphthalene sulfonates, which are well known to be condensation product using formaldehyde as reactant.

Persson et al relates to improved retention using the claimed sulfonate condensation product with the cationic starch of the type disclosed by Ueda and also claimed in the present application, see page 4. It is used in conjunction with conventional fillers and sizing agents such as ketene dimers and acid anhydrides the same used in Ueda, page 10. The starches are especially suited for high conductivity stocks, i.e., those at or above 0.75 mS/cm, especially at least 3.5 mS/cm, page 9. Thus, Persson provides the motivation to one of ordinary skill in the employ the claimed condensed sulfonates in combination with the cationic starch of Ueda.

3. Applicant's arguments have been considered but are deemed unpersuasive of patentability.

It is urged that the claimed composition exhibits unexpected sizing properties when used in the high conductivity furnishes. No comparison has been made with Ueda. Moreover, Persson teaches that superior properties are obtained when the combination of the claimed cationic starch and condensed sulfonate are present in a high conductivity furnish containing sizing agent. This would clearly suggest the modification of Ueda in manner set forth above in order to obtain the benefits taught by Persson. Thus, the alleged unexpected results are in reality expected. Note that Blixt was merely cited to show the nominal amylopectin content of starch as that used in Ueda.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Chin whose telephone number is (703) 308-2046. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (703) 308-1164. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.



Peter Chin
Primary Examiner
Art Unit 1731